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SENNIGER POWERS
ONE METROPOLITAN SQUARE
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EXAMINER	
LEVITAN, DMITRY	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/966,325	SULLIVAN, MARK	
	Examiner	Art Unit	
	Dmitry Levitan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-13,15 and 17-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-13,15 and 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Amendment, filed 6/14/06, has been entered. Claims 1-7, 9-13, 15, 17-20 remain pending.

Claim Objections

1. Claims 6 is objected to because of the following informalities: claim limitation. "receiving the coordinate signal at antenna, wherein the antenna directs the transmission signal according to the received coordinate signal" is interpreted in light of the Amendment as receiving the coordinate signal at the mechanism that controls the antenna positioning. Therefore the claim 16 limitation should be amended to separate the satellite signal receiving at the antenna and the control signals received at the positioning mechanism. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. In light of the Applicant's remarks, the rejection of claims 10, 11, 14-16, 18 and 19 set in the previous Office action, under 35 U.S.C. 112, first paragraph, has been withdrawn.

2. Claims 1-5, 9-13, 15 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 9, 12 and 13 limitations "modulating the coordinate signal" are not supported by the specification as filed.

Claims 4, 10, 17 and 18 limitations directed to a plurality of satellites are not supported by the specification as filed, as the disclosure is directed to a system comprising a single satellite.

3. Claims 4, 5, 10, 12, 13, 15 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claims 4, 10 and 18, how portable satellite uplink is responsive to a teleport for setting a transmitter center frequency and data rate, said center frequency and data rate defining a desired bandwidth for transmissions to a particular satellite to manage transmissions from a plurality of portable uplinks to a plurality of satellites.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

4. In light of the Applicant's remarks, the rejection of claims 8-18 set in the previous Office action, under 35 U.S.C. 112, second paragraph, has been withdrawn.

Claim Rejections - 35 USC § 103

1. Claims 1, 6 and 20 are rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Toporek (US 6,584,083) in view of Haldeman (US 6,801,576) in further view of McNabb (US 6,016,120).

Toporek substantially teaches the limitations of claims 1, 6 and 20:

A satellite uplink for use in connection with a system transmitting media content from first location to a second location (uplink of the satellite system shown on Fig. 1 and 5:6-18, interconnecting two satellite gateways 111A and 111B, operating as central gateways for other gateways to connect them through the satellite link 5:54-60), including a satellite communication link having a transmission propagation delay (satellite links with significant latency 2:38-43, wherein each satellite hop can have latency from 200 ms to 700 ms 10:58-11:2), a communication satellite (satellite on Fig. 1 and 2, 5:6-14),

An encoder encoding media content into a first digital (all formats on the computer 123, shown on Fig. 1 and 5:27-37, are inherently digital, because computers are digital devices) format at the first location (inherently part of client computer 123 on Fig. 1, because encoding application programs run on the computer, as described on 1:47-67, into TCP/IP packets, disclosed on 5:28-36, is essential for the system operation), said format is being sensitive to the transmission propagation delay and requiring at least one transmission acknowledgement signal (TCP format problems with long latency typical for satellite link, including the protocol acknowledgements 4:27-44), the satellite uplink comprising:

A control processor (inherently part of satellite gateway 111A, because all gateways have processors) receiving media content in the first format and providing the at least one transmission acknowledgement signal to the encoder (satellite gateway 203 as shown on Fig. 2, receiving TCP/IP packets from client 201, including the protocol acknowledgements 4:27-44), said control processor converting the media content to a second digital (all formats of signals operating between computers, including webcasting, are inherently digital, because computers

are digital devices) format having a characteristic such that the second format is insensitive to the transmission propagation delay (converting the packets into a satellite protocol in translation module 231, the protocol designed to operate in long latency environment 10:58-11:2);

A satellite communication signal converter receiving the media content in the second format, said satellite communication converter converting the media content received in the second format to a satellite transmission signal compatible with the satellite communication link (inherently part of the satellite gateway 203, because physical layer 237 of satellite gateway 203 on Fig. 2, converting satellite protocol 233 into a signal for transmission to and from the satellite in a wireless medium 239 10:4-22); and

A satellite uplink transceiver receiving the satellite transmission signal and transmitting the satellite transmission signal to the satellite over the satellite communication link (inherently part of ground station 107 on Fig. 1 and 5:12-18, because the ground station is in communication with satellite 101 over the satellite link 105) wherein the satellite downlinks the satellite transmission signal for the reception on the earth at the second location (ground station 108 on Fig. 1 and 5:4-18).

Also Toporek teaches transmitted media that includes graphics, text, sound, animation and real time communications 1:42-67.

Toporek does not teach media content as live media webcasting, making the satellite uplink portable and an antenna controller responsive to a GPS system and an electronic compass for estimating a direction to a satellite and providing corresponding coordinate signal representable of the estimated direction, said antenna controller further being configured for after measuring a signal strength of the communication link established with the satellite and using

coordinate signal to optimize reception of the transmission signal at the satellite and an antenna for directing the satellite transmission signal according to the coordinate signal.

Haldeman teaches live media webcasting (live studio broadcasting distributed through a satellite 172 link and Internet to users 141, shown on Fig. 1 and 3:27-48).

McNabb teaches an antenna controller on a mobile/portable platform (antenna 12 mounted on a mobile platform 14, shown on Fig. 3 and 2:34-44, comprising antenna controller 10, shown on Fig. 1 and 2:34-65) responsive to a GPS system and an electronic compass for estimating a direction to a satellite (utilizing GPS receiver 26 and compass 28, shown on Fig. 1 for the estimation of the satellite direction 2:45-65) and providing corresponding coordinate signal representable of the estimated direction to optimize reception of the transmission signal at the satellite 3:16-47) and an antenna for directing the satellite transmission signal according to the coordinate signal (antenna 12, shown on Fig. 3, directed to a satellite 1:60-63 by a servo-mechanism 11, inherently utilizing coordinate signals, because the coordinate4 signals are essential for the operation of a servo-mechanism).

Official notice is taken that an antenna controller measuring a signal strength of the communication link established with the satellite and optimizing reception of the transmission signal at the satellite by adjusting the antenna direction is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add live media webcasting of Haldeman and making the satellite uplink portable, an antenna controller responsive to a GPS system, an electronic compass for estimating a direction to a satellite and providing corresponding coordinate signal representable of the estimated direction and using coordinate signal to optimize reception of the transmission signal

at the satellite and an antenna for directing the satellite transmission signal according to the coordinate signal of McNabb to the system of Toporek adding an important feature to the system, utilizing the system tolerance to the satellite latency, and making live broadcast available to remote users and make the satellite uplink portable and utilizing GPS and electronic compass the direction estimation to automate the antenna direction process and make it usable at remote locations.

In addition regarding claim 6, Toporek teaches first location and second location are different, because the system is directed to resolve the problem of long delays, caused by the transmission from a first location to the second location 1:20-32 and using GPS and electronic compass inherently comprises receiving positional data , estimating a direction, based on the data and generating a coordinate signal to direct the antenna, because these signals are essential for the system operation.

In addition regarding claim 20, Toporek teaches receiving the satellite transmission on earth (see ground stations 107 and 108, shown on Fig. 1 and 5:6-24, receiving the satellite transmission), providing a third digital webcast signal to at least one user, wherein the third digital webcast format is first digital webcast format (converting back to the original signal format after the satellite transmission to make the connection transparent to the user 5:38-49), and Haldeman teaches rendering the live media content to the user from the decoded digital webcast signal (providing direct real time transmission to remote webcast customer 173, as shown on Fig. 1 and 3:27-42, inherently decoding the received signal, because decoding a video signal from it's webcast format is essential for it visual presentation).

2. Claims 4 and 15 are rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Toporek (US 6,584,083) in view of Haldeman (US 6,801,576) in further view of Pezzlo (US 6,049,561).

Toporek substantially teaches the limitations of claim 4:

A satellite uplink for use in connection with a system transmitting media content from first location to a second location (uplink of the satellite system shown on Fig. 1 and 5:6-18, interconnecting two satellite gateways 111A and 111B, operating as central gateways for other gateways to connect them through the satellite link 5:54-60), including a satellite communication link having a transmission propagation delay (satellite links with significant latency 2:38-43, wherein each satellite hop can have latency from 200 ms to 700 ms 10:58-11:2), a communication satellite (satellite on Fig. 1 and 2, 5:6-14),

An encoder encoding media content into a first digital (all formats on the computer 123, shown on Fig. 1 and 5:27-37, are inherently digital, because computers are digital devices) format at the first location (inherently part of client computer 123 on Fig. 1, because encoding application programs run on the computer, as described on 1:47-67, into TCP/IP packets, disclosed on 5:28-36, is essential for the system operation), said format is being sensitive to the transmission propagation delay and requiring at least one transmission acknowledgement signal (TCP format problems with long latency typical for satellite link, including the protocol acknowledgements 4:27-44), the satellite uplink comprising:

A control processor (inherently part of satellite gateway 111A, because all gateways have processors) receiving media content in the first format and providing the at least one transmission acknowledgement signal to the encoder (satellite gateway 203 as shown on Fig. 2,

receiving TCP/IP packets from client 201, including the protocol acknowledgements 4:27-44), said control processor converting the media content to a second digital (all formats of signals operating between computers, including webcasting, are inherently digital, because computers are digital devices) format having a characteristic such that the second format is insensitive to the transmission propagation delay (converting the packets into a satellite protocol in translation module 231, the protocol designed to operate in long latency environment 10:58-11:2);

A satellite communication signal converter receiving the media content in the second format, said satellite communication converter converting the media content received in the second format to a satellite transmission signal compatible with the satellite communication link (inherently part of the satellite gateway 203, because physical layer 237 of satellite gateway 203 on Fig. 2, converting satellite protocol 233 into a signal for transmission to and from the satellite in a wireless medium 239 10:4-22); and

A satellite uplink transceiver receiving the satellite transmission signal and transmitting the satellite transmission signal to the satellite over the satellite communication link (inherently part of ground station 107 on Fig. 1 and 5:12-18, because the ground station is in communication with satellite 101 over the satellite link 105) wherein the satellite downlinks the satellite transmission signal for the reception on the earth at the second location (ground station 108 on Fig. 1 and 5:4-18).

Also Toporek teaches transmitted media that includes graphics, text, sound, animation and real time communications 1:42-67 and an uplink router (satellite gateway 111A integrated in a router 6:13-15) comprising a satellite transceiver (satellite ground station comprising a satellite modem 5:14-18, as the satellite modem is integrated with a satellite gateway 6:13-15).

Toporek does not teach media content as live media webcasting, making the satellite uplink portable and a portable uplink router at the first location responsive to a teleport for setting a transmitter center frequency, power and data rate, said center frequency and data rate defining a bandwidth for transmissions from a plurality of portable satellite uplinks to a satellite.

Haldeman teaches live media webcasting (live studio broadcasting distributed through a satellite 172 link and Internet to users 141, shown on Fig. 1 and 3:27-48).

Pezzlo teaches a portable uplink router at the first location responsive to a teleport for setting a transmitter center frequency, power and data rate, said center frequency and data rate defining a bandwidth for transmissions from a plurality of portable satellite uplinks to a satellite (satellite system shown on Fig. 1 and 4:19-63, wherein a teleport/Network control Terminal 12n controls the other network portable 3:10-20 Terminal Modems 12a - 12n-1 including their bandwidth, center frequencies and power).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add live media webcasting of Haldeman and making to the system of Toporek adding an important feature to the system, utilizing the system tolerance to the satellite latency, and making a portable uplink router at the first location responsive to a teleport for setting a transmitter center frequency, power and data rate, said center frequency and data rate defining a bandwidth for transmissions from a plurality of portable satellite uplinks to a satellite of Pezzlo for live broadcast available to remote users and make the satellite uplink portable and utilizing a control system for the frequency and bandwidth distribution to organize the operation of multiple uplink routers.

3. Regarding claims 2 and 3 Toporek teaches the first format utilizes a TCP protocol having a first propagation delay tolerance less than the propagation delay of the satellite link (using TCP protocol 213 and 229 as shown on Fig. 2 , wherein TCP delay tolerance is less than typical of satellite links 2:34-50) and wherein the satellite link acts as a TCP endpoint such that second format (conversion from TCP format into a satellite format, wherein satellite gateway is the satellite link endpoint as shown on Fig. 2), comprises modified TCP protocol having a second propagation delay tolerance in excess of the propagation delay is insensitive to the delay (modified TCP format suitable for satellite long latency, for example 200-700 ms 10:58-11:6).

4. Regarding claim 5, Toporek teaches an earth station in communication with satellite (satellite ground station 108 on Fig. 1, comprising satellite gateway 6:13-15), receiving the satellite transmission signal and converting it into a third digital webcast signal having the first digital webcast format (translation module 249 converting the satellite signal into a third signal having the first digital webcast format TCP on Fig. 2 and 10:23-36); and

A router receiving the third digital webcast signal and routing the third digital webcast signal to a wide area network (satellite gateway 205 integrated in a router 6:13-14, routing TCP packets to an Internet as shown on Fig. 1 and 2, 10:30-45, wherein 129 and 259 is Internet).

5. Regarding claim 7, Toporek teaches implementation of the method of claim 6 as computer executable instructions in a personal computer 6:3-12.

6. Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toporek in view of Haldeman in view of McNabb in further view of Pezzlo (US 6,049,561).

Toporek in view of Haldeman in view of McNabb teaches all the limitations of claims 1 and 6 (see claims rejection above).

Toporek in view of Haldeman in view of McNabb does not teach adjusting the power of the satellite transmission signal.

Pezzlo teaches a portable uplink router at the first location responsive to a teleport for setting a transmitter power for a plurality of portable satellite uplinks to a satellite (satellite system shown on Fig. 1, wherein a teleport/Network control Terminal 12n controls the other network portable 3:10-20 Terminal Modems 12a - 12n-1, including their power transmitters 32 on Fig. 2 and 4:19-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add adjusting the power of the satellite transmission signal of Pezzlo to the system of Toporek in view of Haldeman to improve the system operation with multiple and diverse service areas.

7. Claim 12 is rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Toporek in view of Haldeman and Pezzlo in further view of McNabb.

Toporek in view of Haldeman and Pezzlo substantially teaches claim 12 (see claim 4 rejection above).

Toporek in view of Haldeman and Pezzlo does not teach an antenna controller responsive to a GPS system and an electronic compass for estimating a direction to a satellite and providing corresponding coordinate signal representable of the estimated direction, said antenna controller further being configured for after measuring a signal strength of the communication link established with the satellite and using coordinate signal to optimize reception of the transmission signal at the satellite and an antenna for directing the satellite transmission signal according to the coordinate signal.

McNabb teaches an antenna controller on a mobile/portable platform (antenna 12 mounted on a mobile platform 14, shown on Fig. 3 and 2:34-44, comprising antenna controller 10, shown on Fig. 1 and 2:34-65) responsive to a GPS system and an electronic compass for estimating a direction to a satellite (utilizing GPS receiver 26 and compass 28, shown on Fig. 1 for the estimation of the satellite direction 2:45-65) and providing corresponding coordinate signal representable of the estimated direction to optimize reception of the transmission signal at the satellite 3:16-47) and an antenna for directing the satellite transmission signal according to the coordinate signal (antenna 12, shown on Fig. 3, directed to a satellite 1:60-63 by a servo-mechanism 11, inherently utilizing coordinate signals, because the coordinate4 signals are essential for the operation of a servo-mechanism).

Official notice is taken that an antenna controller measuring signal strength of the communication link established with the satellite and optimizing reception of the transmission signal at the satellite by adjusting the antenna direction is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an antenna controller responsive to a GPS system, an electronic compass for estimating a direction to a satellite and providing corresponding coordinate signal representable of the estimated direction and using coordinate signal to optimize reception of the transmission signal at the satellite and an antenna for directing the satellite transmission signal according to the coordinate signal of McNabb to the system of Toporek in view of Haldeman and Pezzlo adding an important feature to the system, utilizing GPS and electronic compass the direction estimation to automate the antenna direction process and make it usable at remote locations.

8. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toporek in view of Haldeman in further view of McNabb in further view of Pezzlo.

Toporek in view of Haldeman in further view of McNabb substantially teaches the limitations of the claims (see claims 1 and 6 rejection above).

Toporek in view of Haldeman in further view of McNabb does not teach a portable uplink router at the first location responsive to a teleport for setting a transmitter center frequency, power and data rate, said center frequency and data rate defining a bandwidth for transmissions from a plurality of portable satellite uplinks to a satellite.

Pezzlo teaches a portable uplink router at the first location responsive to a teleport for setting a transmitter center frequency, power and data rate, said center frequency and data rate defining a bandwidth for transmissions from a plurality of portable satellite uplinks to a satellite (satellite system shown on Fig. 1 and 4:19-63, wherein a teleport/Network control Terminal 12n controls the other network portable 3:10-20 Terminal Modems 12a - 12n-1 including their bandwidth, center frequencies and power).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a portable uplink router at the first location responsive to a teleport for setting a transmitter center frequency, power and data rate, said center frequency and data rate defining a bandwidth for transmissions from a plurality of portable satellite uplinks to a satellite of Pezzlo to the system of Toporek in view of Haldeman in further view of McNabb to utilize a control system for the frequency and bandwidth distribution to organize the operation of multiple uplink routers.

9. Claims 9, 13 and 17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Toporek in view of Haldeman and McNabb/Pezzlo in further view of Ma (US 4,801,940). Toporek in view of Haldeman and McNabb/Pezzlo substantially teaches the limitations of the claims (see claims 1, 4 and 6 rejection above).

Toporek in view of Haldeman and McNabb/Pezzlo does not teach antenna controller modulating the coordinate signal to sweep antenna in a range of directions to identify the directions to plurality of satellites and selects the direction to a satellite having the best measured signal level.

Ma teaches antenna controller modulating the coordinate signal to sweep antenna in a range of directions to identify the directions to plurality of satellites and selects the direction to a satellite having the best measured signal level (satellite receiving system with antenna scanning mechanism to identify a plurality of satellites based on the measured signal strength 2:10-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add antenna controller modulating the coordinate signal to sweep antenna in a range of directions to identify the directions to plurality of satellites and selects the direction to a satellite having the best measured signal level of Ma to the system of Toporek in view of Haldeman and McNabb/Pezzlo to automate the direction of the antenna to a satellite.

Response to Arguments

10. Applicant's arguments filed 6/14/06 have been fully considered but they are not persuasive.

Regarding arguments, directed to the new claims and limitations, introduced by the amendment of 6/14/06, please see the rejection of the claims above.

On page 11 of the Response, Applicant argues that claim 1 limitations are fully supported by the disclosure.

Examiner respectfully disagrees.

The cited paragraphs of the specification provide no information on the modulating of the coordinate signal procedure. The only one modulator in the system (Fig. 2, modulator 216) modulates the signal for transmission to the satellite. However the coordinating signals are utilized for positioning of the local antenna (Fig. 2, antenna 224), so the modulation of the coordination signals contradicts the disclosure [0074].

On page 23 of the Response, Applicant argues that claim 4 limitations are fully supported by the disclosure.

Examiner respectfully disagrees.

The disclosure provides no information on the system operation with plural satellites as the disclosed system is directed to an operation with a single satellite.

The control system directed to the frequency and bandwidth management of plurality uplinks connected with a plurality of satellites was not disclosed to provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7529. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dmitry Levitan
Examiner
Art Unit 2616